

LALLY COLUMNS



1897-1917

LALLY COLUMN CO. OF NEW YORK

CALYER AND RUSSELL STREETS, BROOKLYN, N. Y.

LALLY PATENT COLUMNS

CONCRETE FILLED COLUMNS FOR ALL CLASSES
OF BUILDINGS DESIGNED TO SUIT EVERY
STRUCTURAL CONDITION



INDORSED BY THE BUILDING DEPARTMENTS OF
ALL LARGE CITIES AND BY THE LEADING
ARCHITECTS AND ENGINEERS

BROOKLYN, N. Y.

April 20th, 1918.

The Westinghouse Co.,
Schenectady,
N. Y.

Gentlemen;

Replying to your inquiry of the 18th
inst., we are enclosing herewith copy of our
latest catalogue containing full information in
regard to Lally Columns.

On page 24 you will note the list prices
on light weight columns. At the present time we
are quoting as follows on these columns; 3", 3½"
and 4½"-----list, plus 10%. 4"-----list price.
5"-----list, plus 35%. 6"-----list, plus 25%.

Should you require any heavy weight col-
umns, kindly send us schedule and we will quote
you on same.

Very truly yours,
LALLY COLUMN CO. OF N.Y.

AK.

EVERY LIBRARY
COLUMBIA UNIVERSITY

United States Column Co.

CAMBRIDGE, MASSACHUSETTS

Established 1897



LALLY COLUMN CO. OF NEW YORK

Calyer and Russell Streets
Brooklyn, New York



LALLY COLUMN CO. OF CHICAGO

4001 Wentworth Avenue
Chicago, Illinois

Manufacturers of

**LALLY PATENT
COLUMNS**

CONTENTS

John Lally, Inventor of the LALLY COLUMN	3
Testing a Lally Column at the Watertown Arsenal	4
Description of Lally Columns	5
Specifications of Lally Columns	6-7
Descriptions of Standard Bracket Caps	8-10
Latest Bracket Cap Construction	11
Bracket Cap with Double Flange Connections	12
Continuous Lally Columns	13
Ornamental Lally Columns	14
Standard Lally Columns	15
Adjustable Caps	16
Lally Columns with Beam Supports at Different Elevations	17
Continuous Veranda Support	18
Railroad Shelter Construction Using Lally Columns	19
Reinforced Lally Columns	20-21
Steel Built-up Bases	22
Sizes of Caps and Bases for Light-Weight Columns Carried in Stock	23
Diameter and Lengths of Light-Weight Columns Carried in Stock	23
Price List of Lally Light-Weight Columns	24
Strength List of Lally Light-Weight Columns	25
Price List of Lally Heavy-Weight Columns	26-27
Strength List of Lally Heavy-Weight Columns	28
Advantage of Lally Columns	29-31
Tests Made at Wentworth Institute	32
Buildings Equipped with Lally Columns	34-43
Views of Chelsea and Salem Fires, Effect on Lally Columns	44-58
Building in which Lally Columns Were Used	62-63
Patents on Lally Columns	64

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JOHN LALLY, Inventor of "Lally Columns"



Testing a Lally Column



LALLY COLUMNS are a building support made up of a steel outer shell and a compact filling of concrete. They are the best, cheapest, and most durable support made. The LALLY COLUMNS are made in a modern factory, thoroughly equipped with modern machinery. Each L A L L Y COLUMN must take so much filling, weigh so much, and stand so many tons compression. Each LALLY COLUMN goes through a process of manufacture, by special machinery, which entirely eliminates air holes or cavities. Each LALLY COLUMN is stamped with our trade mark, "LALLY PATENT COLUMN." Each column is filled under the supervision of an official inspector. The outside shell of a LALLY COLUMN is made of steel. The inner part, or filling, is made of sand, cement, and blue trap rock of the highest quality, automatically measured, machine mixed and thoroughly compressed, giving the highest possible results for the compression of concrete. These facts are proven by our United States Arsenal tests.

LALLY COLUMNS are manufactured complete, and shipped ready to set up in the building in one fourth the time of any other columns.

Why Architects Should Specify

Lally Columns

1. Because they are the best supports known.
2. Because they are absolutely reliable for what we claim for them.
3. Because by our system of reinforcement a much smaller diameter may be used when desired.
4. Because we are the only people in the column business equipped with special machinery for making such columns.
5. BECAUSE WE ARE THE ORIGINATORS, AND ALL OTHERS ARE INCOMPETENT, INEXPERIENCED, WOULD-BE IMITATORS.
6. Because we have a full line of tests from the United States Arsenal to prove the value of LALLY COLUMNS.
7. Because there is no danger of failure of our steel bracket caps, as in the case of cast iron. The uncertainty of a cast-iron bracket is conceded by all authorities.
8. Because in the hundreds of thousands of columns used in our fifteen years experience we have not had one accident caused by our columns.
9. Fire, water, and weight will quickly destroy a hollow column, but many times the same quantity of fire, water, or weight will not even affect the LALLY COLUMN.
10. The LALLY COLUMN can be furnished in less than one quarter the time that a cast iron or a steel made-up column can be turned out, making a large saving of time, which is a saving of money.
11. Because the Lally Patent Steel Cap for beams and continuous column connection is so far superior to the Loose Cast Iron Cap used by our imitators. See pages 29, 30, and 31.

Why Architects Should Insist Upon Using the

Lally Column

When They Specify it

Because there are, unfortunately, a number of unscrupulous people who are always anxious to "skin the job"; and such men frequently try to substitute some cheap, worthless article for the LALLY COLUMN, regardless of the injustice to the owner and the architect. All for the saving to themselves of a few cents on an article of the most vital importance in the whole building — the supports.

We invite comparison of the LALLY COLUMN with any column on the market, in actual test, knowing that for strength, durability, and economy it is without a peer.

LALLY COLUMNS are cheaper in the same carrying capacity than any other column.

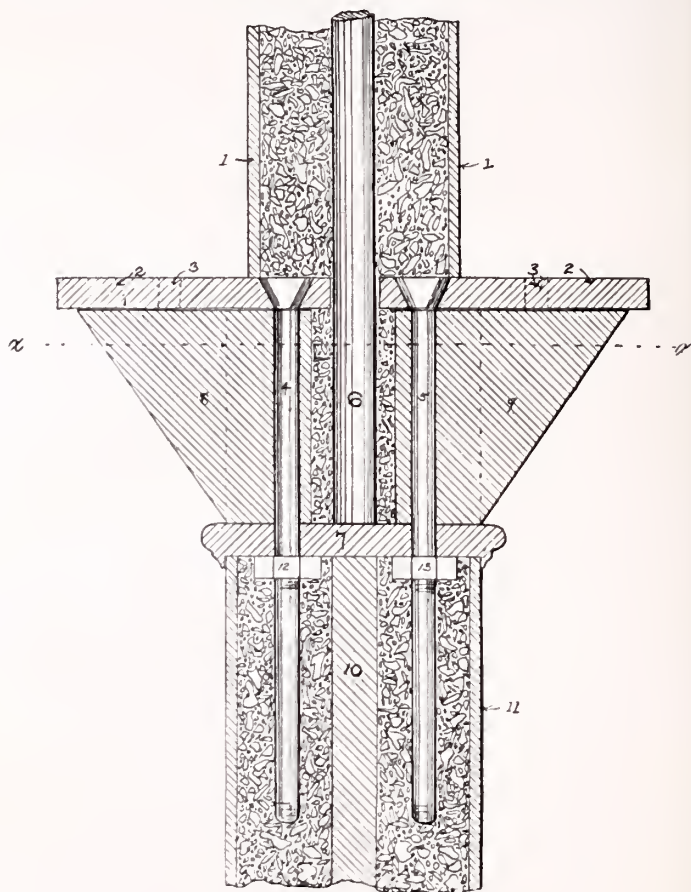


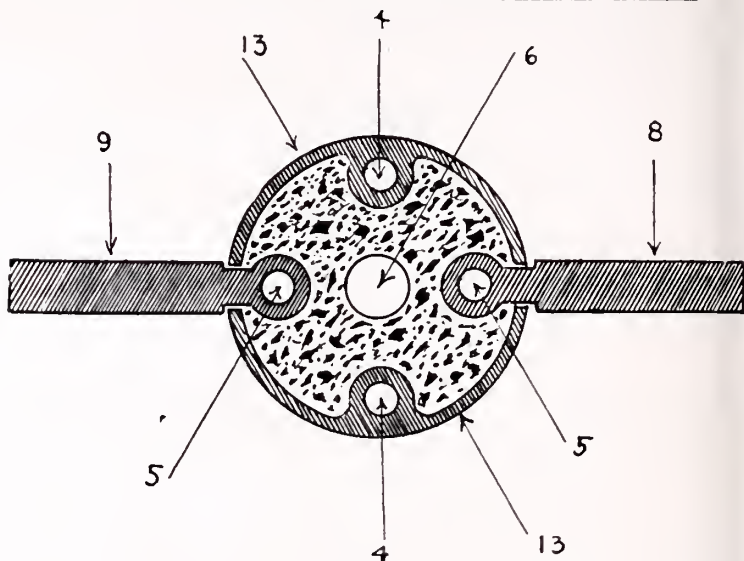
Fig. A

Showing a detail of the construction of our standard Steel Patent Cap. This whole arrangement makes a complete assembled steel and concrete bracket cap for beam and continuous column connections.

Description of Fig. A

(In corresponding numerals)

1. Represents steel shell of upper column.
2. Represents crown plate of bracket cap upon which beams or girders rest.
3. Holes for bolts to fasten beam to plate 2.
- 4, 5. Represent tie bolts passing from crown plate 2, through brackets 8 and 9, also through cap 7, entering the casing 11 of the lower column, and also embedded in the concrete.
6. Represents a steel rod or pintle embedded in the concrete at the base of the upper column, extending into the cap of the lower column, resting on cap plate No. 7, thus holding the upper column firmly in position.
7. Represents a cap plate which sets on casing No. 11 of the lower column, forming a seat for brackets 8 and 9, through which the bolts 4 and 5 pass.
- 8, 9. Are brackets setting on cap 7, extending to the under side of crown plate 2, with bolts 4 and 5 passing through same, making a bracing support for crown plate 2, on which beams rest.
10. Represents a reinforcement of steel embedded in concrete of lower column, passing from under side of cap 7 to base of column.
11. Represents steel shell of lower column.



Plan of LALLY PATENT steel cap at section
x x of Fig. A

Description

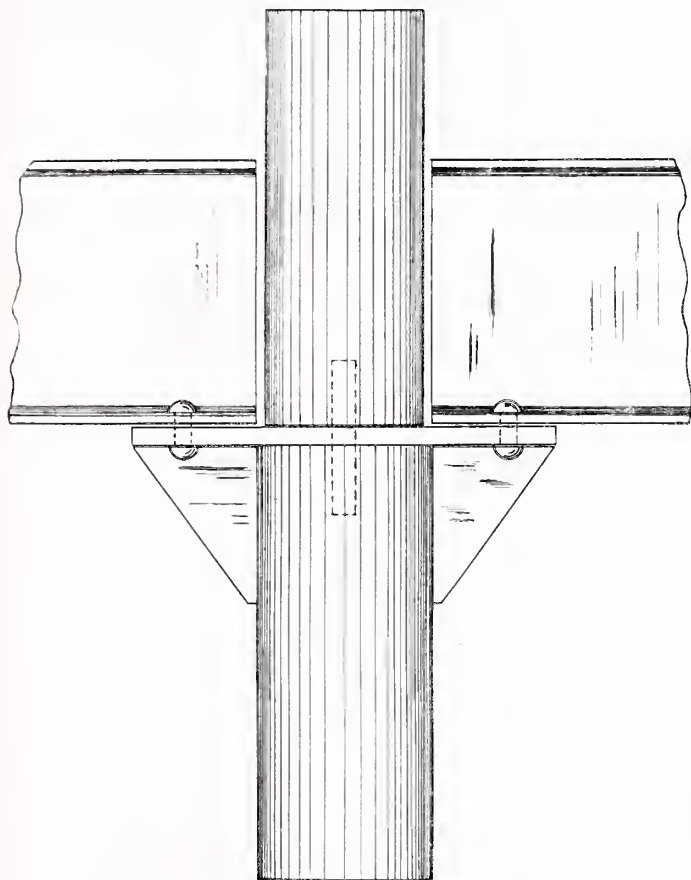
(In corresponding numerals)

No. 4 and No. 5 show tie bolts which bind the members of the cap and secure the cap to the column shaft.

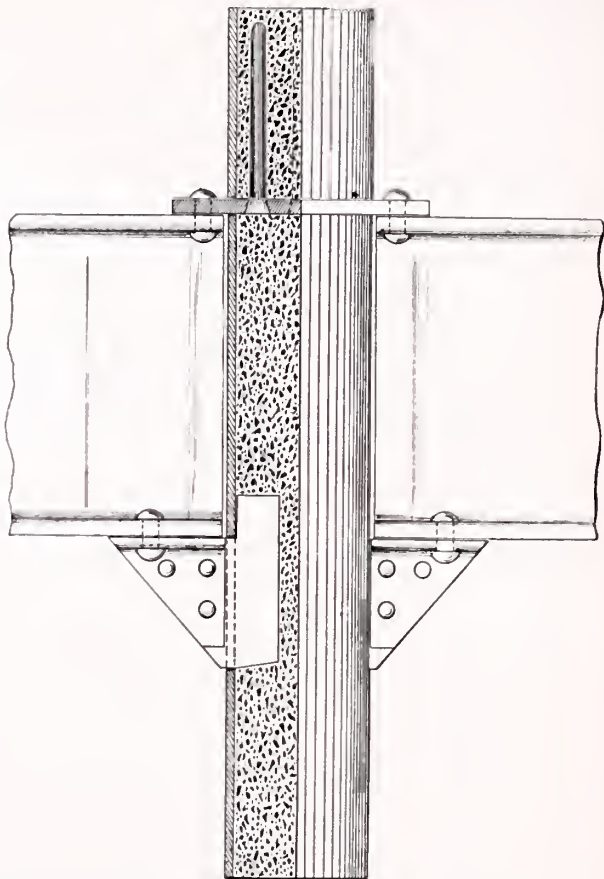
No. 6 shows the dowel pin which extends from the upper column.

No. 8 and No. 9 show strengthening brackets through which bolts No. 4 and No. 5 pass. These brackets support the crown plate upon which the beams rest.

No. 13 shows segments which form the neck of the cap and make a uniform support for crown plate No. 2 of Fig. A.



The above cut shows our latest construction of bracket and beam support where one column sets over the other. This cap consists of crown plate and steel bracket inserted through slots in the column shaft and firmly affixed thereto.



The above cut shows a special connection fastening top and bottom flanges of beams securely to column.

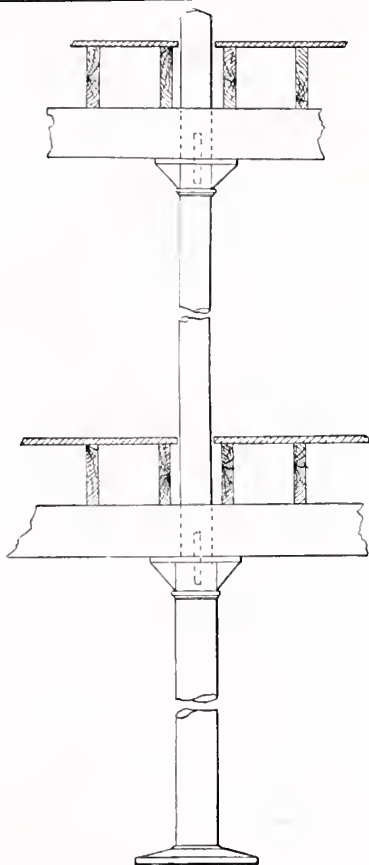


Fig. C

Shows continuous LALLY COLUMN and Beam connection. The upper column resting on crown plate of lower column. Both columns are connected by a dowel pin as shown, or may be bolted together if desired.

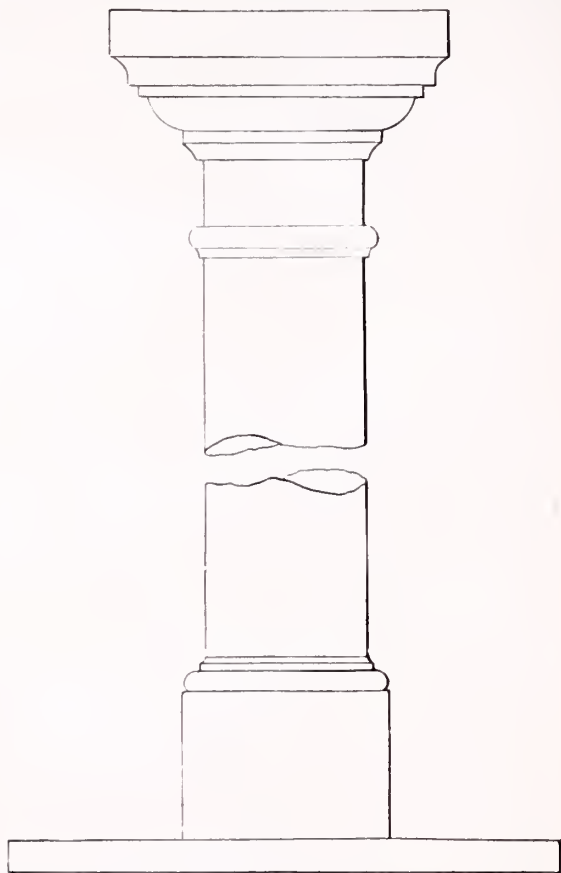


Fig. D

Ornamental column for exterior and interior work.

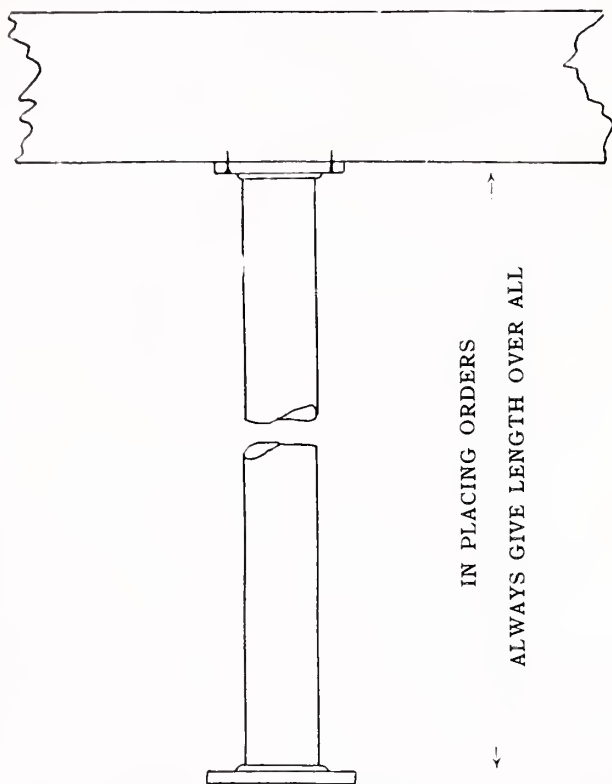
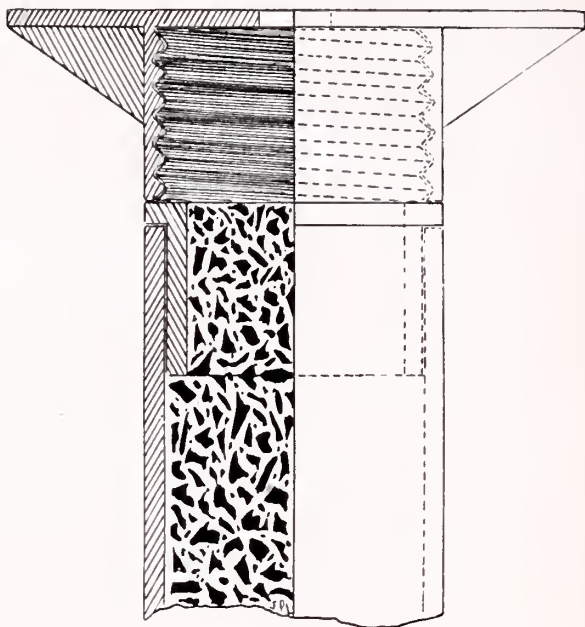


Fig. F

Plain Shaft Column with Ordinary Plate for Wood Beam Connection.

For stock lengths and sizes of caps and bases, see page 23.

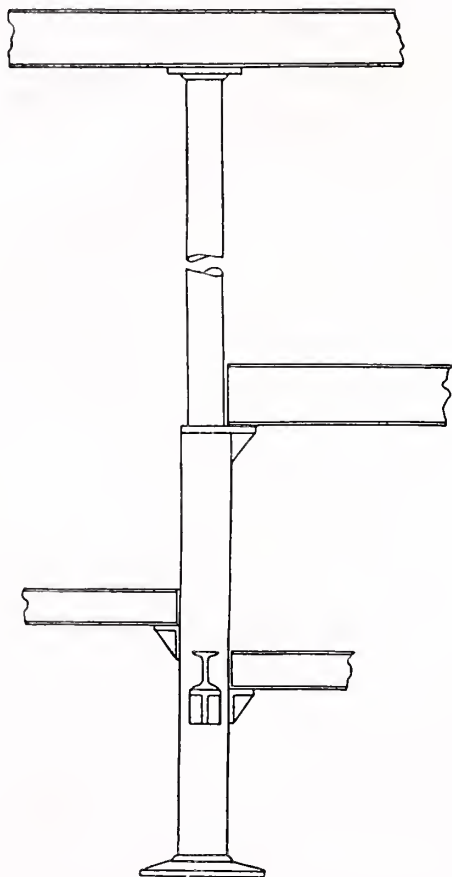


The above is an illustration of our screw caps especially adapted where a variation in a length may be desired.

Columns equipped with these caps may be shortened or lengthened while set in place.

This type of column will be appreciated by persons familiar with the erecting of columns, as it eliminates the necessity of shimming.

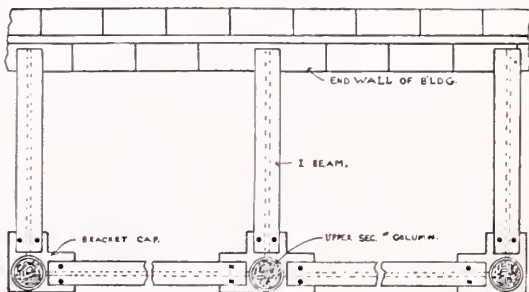
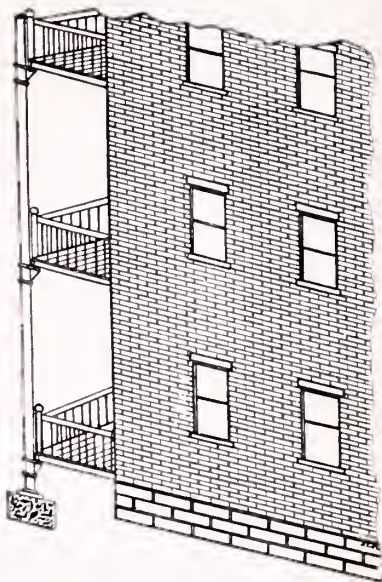
We carry these caps in stock for 4 inch, 4½ inch, and 5 inch columns only.



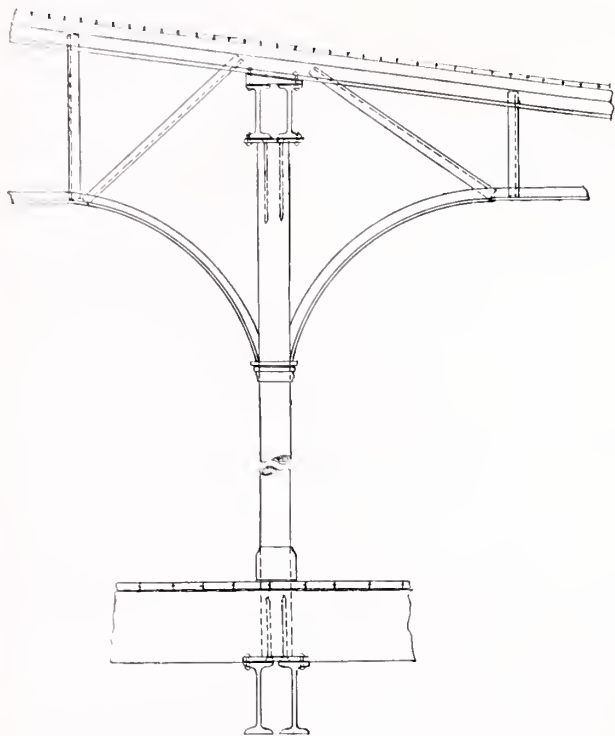
Lally Column with Beam Supports at Different Elevations.
These columns may be arranged to meet any requirements.

Lally Columns as a continuous veranda support for either wooden girders or steel beams are unsurpassed.

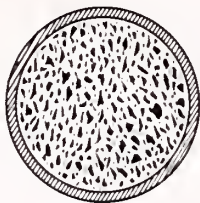
Our special caps present a neat appearance and are particularly adapted to this form of construction.



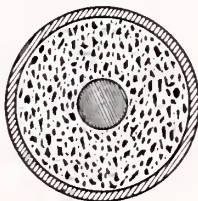
Plan showing cap connections for beams and continuous columns of veranda.



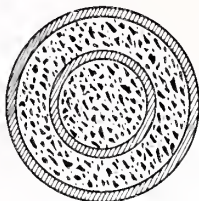
The above is a design showing the advantage and ready application of Lally Columns in railroad station shelters. We solicit inquiries from interested persons in this line of construction.



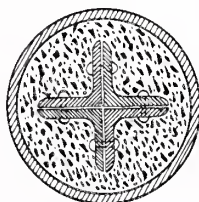
The above is a section of a Lally Column showing the steel outer shell filled with concrete. The concrete is compressed, thus eliminating all air voids. Lally Columns are made in light and heavy weight sections.



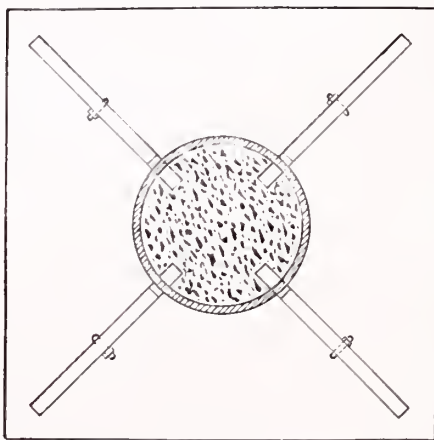
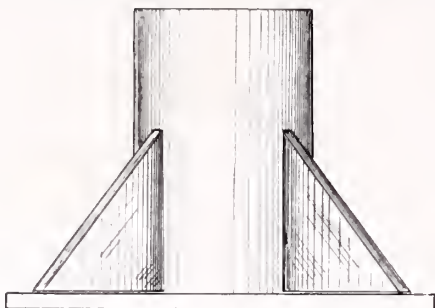
This cut is a section of a Lally Column with a single steel bar reinforcement. This type is used wherever a small additional reinforcement is required.



In this cut is shown a section of a Lally Column reinforced with a pipe. This construction is used wherever reinforcing to the extent of several square inches of metal area is necessary to sustain the load prescribed.



The reinforced Lally Column shown in the section above is the most compact fireproof column manufactured. The four angle irons as well as the concrete within the radius of same are designed to carry the load. The outer shell and the concrete outside the radius of the angles act as fireproofing and make the column practically indestructible.



Here is shown a new steel built-up base attached to a Lally Column. It consists of a steel bottom plate fastened to the four steel brackets which are firmly attached to the column shaft through slots in same.

Stock Sizes of Caps and Bases for Light-Weight Columns

Diam. Col.	Size of Plates
3"	$5\frac{1}{2}'' \times 5\frac{1}{2}'' \times \frac{1}{2}''$
$3\frac{1}{2}''$	$6'' \times 6'' \times \frac{1}{2}'' - 6'' \times 8'' \times \frac{1}{2}''$
4"	$6'' \times 6'' \times \frac{5}{8}'' - 6'' \times 8'' \times \frac{5}{8}'' - 8'' \times 8'' \times \frac{5}{8}''$
$4\frac{1}{2}''$	$8'' \times 8'' \times \frac{3}{4}''$
5"	$8'' \times 8'' \times \frac{3}{4}'' - 10'' \times 10'' \times \frac{3}{4}''$
6"	$8'' \times 8'' \times 1'' - 10'' \times 10'' \times 1'' - 12'' \times 12'' \times 1''$

Stock Lengths of Light-Weight Columns

Diam. Col.	Lengths		
3"	6'-0"	6'- 8"	7'-4"
	6'-4"	6'-10"	7'-6"
	6'-6"	7'- 0"	
$3\frac{1}{2}''$	6'-0"	6'-10"	8'-0"
	6'-4"	7'- 0"	8'-6"
	6'-6"	7'- 4"	9'-0"
	6'-8"	7'- 6"	
4"	Same Lengths as $3\frac{1}{2}''$		
	7'-0"	8'-6"	10'-0"
$4\frac{1}{2}''$	7'-6"	9'-0"	
	8'-0"	9'-6"	
5"	Same Lengths as $4\frac{1}{2}''$		
6"	8'-0"	9'-0"	10'-0"
	8'-6"	9'-6"	

To avoid delay please confine yourself to these lengths if possible

Price List of Our Light-Weight Lally Columns

Lengths of Columns in Feet, including Caps and Bases

This price list supersedes all previous lists

Diam.	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"	11'-0"	11'-6"	12'-0"	Price for each additional ft. over 12'-0"
3"	\$1.65	\$1.75	\$1.90	\$2.00	\$2.20	\$2.40	\$2.65	\$2.80	\$2.95	\$3.10	\$3.25	\$.27
3 1/2"	1.90	2.00	2.20	2.40	2.65	2.90	3.15	3.40	3.65	3.80	4.00	.35
4"	2.75	3.00	3.25	3.50	3.80	4.10	4.40	4.75	5.10	5.45	5.80	.50
4 1/2"	4.00	4.50	5.00	5.25	5.50	5.75	6.00	6.50	6.75	7.00	7.50	.65
5"	5.00	5.50	5.85	6.20	6.65	7.10	7.55	8.00	8.45	8.90	9.25	.80
6"	6.00	6.50	6.95	7.35	8.00	8.65	9.30	9.95	10.60	11.25	11.90	1.00

These prices include a stock size cap and base complete. For stock sizes, see page 23. Prices of bracket caps on these columns same as heavy weights of same diameter, except 6" diameter which takes 5 1/2" heavy weight price. See pages 26 and 27 for prices on heavy-weight columns.

Safe Carrying Capacity of Light-Weight Lally Columns in tons of 2,000 lbs.

Safety factor of 4

Diam.	Weight in lbs. of Plain Col. Shaft per ft.	Length of Column in Feet											
		6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	
3"	9.64	Tons 6	Tons 6	Tons 5									
3½"	13.09	9	9	8	8	7							
4"	17.02	13	13	12	12	11	10						
4½"	21.05	14	14	13	13	12	11	10					
5"	25.90	20	20	19	19	18	18	17	17	16			
6"	36.82	28	28	27	27	26	26	25	24	23	23	22	

For Standard Stock Lengths of Light-Weight Columns see list on page 23.

See pages 26, 27, and 28, for Heavy-Weight Columns.

All lengths should be given over all, including caps and bases.

REVISED

L A L L Y H E A V Y -

Prices and Sizes Steel Bracket Caps

Diam. of Col.	Size Crown Plate 1 way	Price of 1 way	Size of 2 way	Price of 2 way	Size of 3 way	Price of 3 way	Size of 4 way	Price of 4 way	Price of plain col. shaft per ft.
3 $\frac{1}{2}$ "	4"x 8"x $\frac{1}{2}$ "	\$2.76	4x12x $\frac{1}{2}$ "	\$2.88	8x12x $\frac{1}{2}$ "	\$3.60	12x12x $\frac{1}{2}$ "	\$4.10	\$.52
4"	6"x 8"x $\frac{1}{2}$ "	2.96	6x12x $\frac{1}{2}$ "	3.16	8x12x $\frac{1}{2}$ "	3.66	12x12x $\frac{1}{2}$ "	4.14	.66
4 $\frac{1}{2}$ "	6"x 9"x $\frac{1}{2}$ "	3.14	6x14x $\frac{1}{2}$ "	3.38	9x14x $\frac{1}{2}$ "	4.00	14x14x $\frac{1}{2}$ "	4.62	.74
5"	6"x10"x $\frac{1}{2}$ "	3.58	8x15x $\frac{1}{2}$ "	4.24	10x15x $\frac{1}{2}$ "	4.78	15x15x $\frac{1}{2}$ "	5.56	.90
5 $\frac{1}{2}$ "	6"x10"x $\frac{1}{2}$ "	3.86	8x15x $\frac{1}{2}$ "	4.52	10x15x $\frac{1}{2}$ "	4.96	15x15x $\frac{1}{2}$ "	5.66	1.10
6 $\frac{1}{2}$ "	8"x12"x $\frac{1}{2}$ "	5.20	10x17x $\frac{1}{2}$ "	6.34	12x17x $\frac{1}{2}$ "	6.86	17x17x $\frac{1}{2}$ "	7.70	1.46
7 "	8"x14"x $\frac{1}{2}$ "	6.20	10x18x $\frac{1}{2}$ "	7.06	14x18x $\frac{1}{2}$ "	7.94	18x18x $\frac{1}{2}$ "	8.62	1.52
8 $\frac{1}{2}$ "	10"x15"x $\frac{1}{2}$ "	6.96	10x20x $\frac{1}{2}$ "	7.60	15x20x $\frac{1}{2}$ "	8.86	20x20x $\frac{1}{2}$ "	9.86	2.18
9 $\frac{1}{2}$ "	10"x16"x $\frac{1}{2}$ "	7.60	10x22x $\frac{1}{2}$ "	8.38	16x22x $\frac{1}{2}$ "	9.88	22x22x $\frac{1}{2}$ "	11.14	2.56
10 $\frac{1}{2}$ "	12"x17"x $\frac{1}{2}$ "	9.36	12x24x $\frac{1}{2}$ "	10.44	17x24x $\frac{1}{2}$ "	11.48	24x24x $\frac{1}{2}$ "	12.92	3.18
12 $\frac{1}{2}$ "	13"x19"x $\frac{1}{2}$ "	11.50	13x24x $\frac{1}{2}$ "	12.34	19x24x $\frac{1}{2}$ "	13.52	24x24x $\frac{1}{2}$ "	14.18	4.36

We manufacture Steel Bracket Caps any size and shape to meet any and all requirements. We charge for extra steel furnished in caps larger than stock sizes

NOVEMBER 1, 1916

WEIGHT COLUMNS

Prices and Sizes of Plate. Cast Iron Caps and Bases

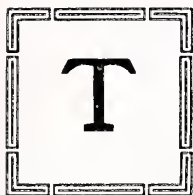
Diam. of Col.	Area of Metal Section of Column	Area of Concrete Section of Column	Size of C. I. Cap	Price of C. I. Cap	Size of C. I. Base	Price of C. I. Base
3½"	2.23"	7.38"	6x 8x ½"	\$.25	6x 8x ½"	\$.25
4"	2.68"	9.88"	8x 8x ⅝"	.40	8x 8x ⅝"	.40
4½"	3.17"	12.73"	8x 8x ¾"	.45	8x 8x ¾"	.45
5"	3.67"	15.96"	10x10x ¾"	.70	10x10x ¾"	.70
5½"	4.32"	19.98"	10x10x ⅞"	.70	12x12x1"	1.50
6⅝"	5.58"	28.88"	10x14x1"	1.40	16x16x1½"	3.40
7⅝"	6.92"	38.72"	12x14x1¼"	2.10	18x18x2"	5.80
8⅝"	8.40"	50.02"	12x14x1½"	2.10	20x20x2½"	9.00
9⅝"	10.04"	62.72"	Special	Special	22x22x3"	12.00
10⅝"	11.94"	78.82"	Special	Special	24x24x3"	20.00
12⅝"	14.59"	113.09"	Special	Special	Special	Special

*Beveled

Safe Carrying Capacity of our Heavy-Weight Lally Patent Columns in tons of 2,000 lbs.

Safety factor of 4. These loads can be increased by reinforcing to suit any condition

Outside Diameter	Length of Columns in Feet							Weight	
	6'	8'	10'	12'	14'	16'	18'	20'	per foot
$3\frac{1}{2}"$	12	11	10	9					15
4"	16	15	14	12	11				20
$4\frac{1}{2}"$	20	18	17	16	15				24
5"	27	26	24	22	21	19			29
$5\frac{1}{2}"$	32	31	29	28	26	24	22		36
$6\frac{5}{8}"$	45	43	41	40	38	35	34	32	49
$7\frac{5}{8}"$	58	56	54	52	51	49	46	44	64
$8\frac{5}{8}"$	74	72	69	67	65	62	60	57	81
$9\frac{5}{8}"$	93	89	87	85	82	79	77	75	100
$10\frac{3}{4}"$	111	109	107	104	101	99	96	93	123
$12\frac{3}{4}"$	150	146	144	141	139	135	133	130	169



THE popularity of the Lally Column is largely due to its reliability.

It is an established fact that cast iron is an uncertain quantity. The cast iron cap used by our imitators as shown on page 30 makes the vital part of the column unreliable. The inside of this cast iron sleeve cap rests loosely on the top of the column shaft, and is very often rough and uneven. The depth of the sleeve makes it impracticable to reach the bearing surface with a tool to smooth or face it. This gives the cap an uneven bearing on the column, which results in the glaring weakness as shown by the illustration on page 30.

OUR LALLY STEEL CAPS ARE ALWAYS RELIABLE
AND SURE TO CARRY THE LOAD FOR WHICH THEY
ARE DESIGNED.



CAST IRON CONNECTION

Above cut shows a two-way, loose, cast-iron bracketed cap which our imitators use. To prove the weakness of this type of beam connection, we have had a test of same at U. S. Arsenal, resulting in an ultimate strength of only 84,200 pounds.

You will note that in this connection the column shaft enters up into a sleeve, the crown plate of the cap resting on the column shaft. The supporting brackets are cast on said sleeve. You can readily see the vast inferiority of this loose connection by the above test.



LALLY CONNECTION

Above cut shows the New Lally Steel Bracket Two-way Beam and Column Connection. This cap has been tested at the U. S. Arsenal, offering a resistance of 500,000 pounds, and then only bending the plates and brackets slightly.


We ask you to contrast figures on pages 30 and 31.

These cuts are half-tones taken from photographs of the identical Caps which were tested.



Here are shown four Lally Columns that were tested by the Wentworth Institute of Boston, Mass., with absolutely no solicitation on our part.

You will note on the cards attached to the columns that in each case the failure of the column was at a greater pressure than our listed loads for these sizes.

 **I**N the following pages we show pictures of some of the various types of Buildings which we have equipped with Lally Columns.

We especially call your attention to the photographs showing the Lally Columns which have stood in defiance of the ravages of the terrible Chelsea and Salem fires.



Lally Columns in "Boston Store" of Denholm & McKay Co.,
Worcester, Mass.

Nearly all architects use Lally Columns for store and
mercantile buildings.



This picture shows one of the six floors of the new Kerr Mill, Fall River, Mass., for the American Thread Co., equipped with Lally Columns, continuous from basement to roof.

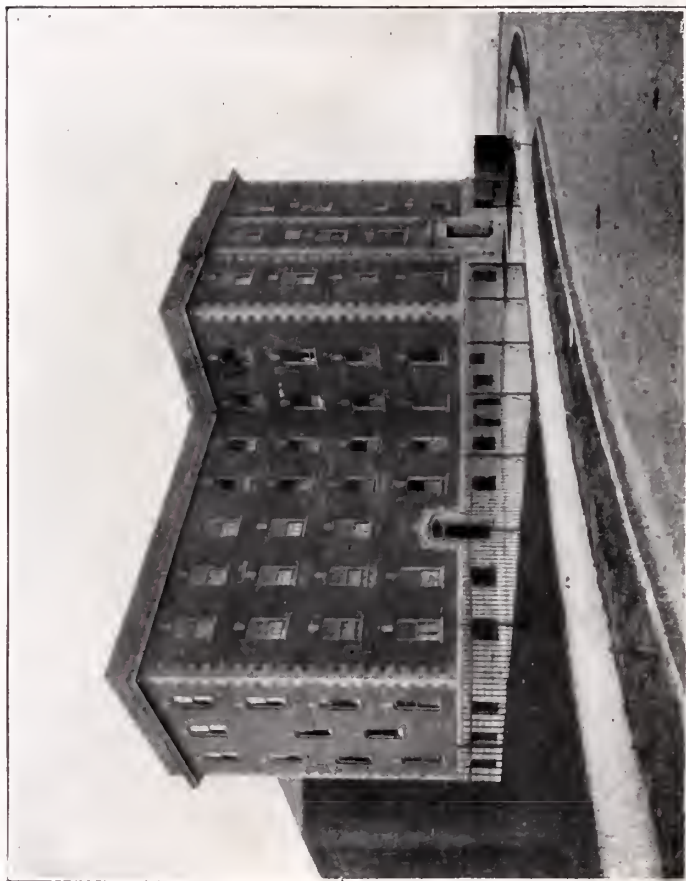


Exterior View of Kerr Mill, Fall River, Mass.

The Lally Columns and connections are used extensively in mill construction. Some of the largest mills in the country are supported by Lally Columns.



Lally Columns in Shetucket Woolen Mills, Baltic, Conn.



Nurses' Dormitory, Eye and Ear Infirmary
Equipped with Lally Columns from Basement to Roof

Boston, Mass.



Holmes Manufacturing Co. Mill
Lally Columns used throughout

New Bedford, Mass.
Charles W. Praray, Eng.



Holmes Manufacturing Co. Mill

Showing Lally Columns in Basement

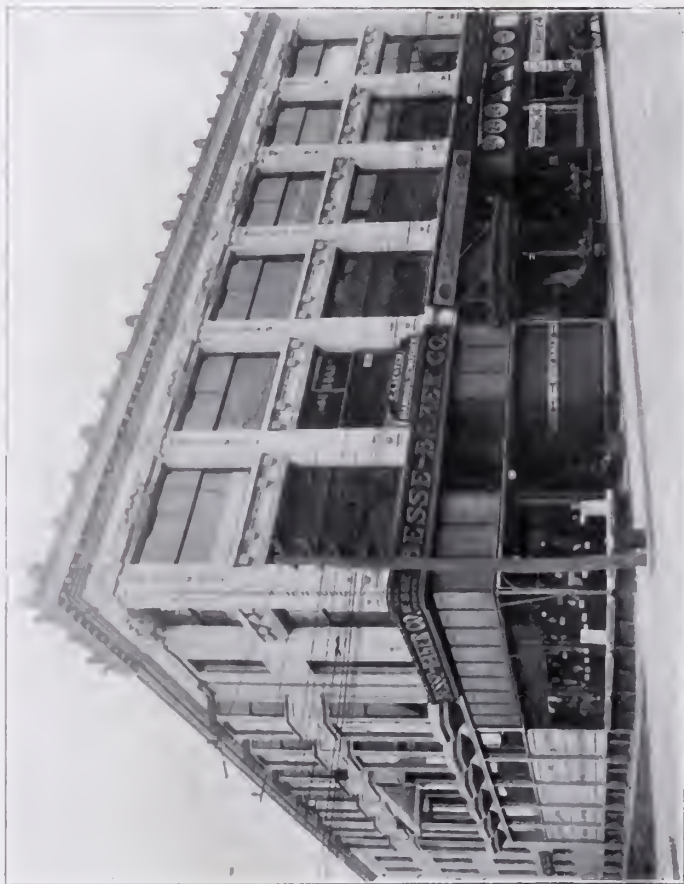
New Bedford, Mass.



Domenico Building

Lally Columns used

Chelsea, Mass.



Richmond Building

Lally Columns used throughout

Brockton, Mass.



Saint Rose Catholic Church

Chelsea, Mass.

Lally Columns used before and after the fire

LALLY COLUMNS IN RUINS OF CHELSEA



Ruins of St. Rose Catholic Church in Chelsea, Mass.

Showing Lally Columns standing as firm as before the fire. This photograph was taken the morning after the fire.

There can be no doubt of the supremacy of the Lally Columns after these wonderful tests for fire resistance.



Another View of the Chelsea Ruins

The Lally Columns may be seen here standing upright and unharmed by the terrible fire which destroyed all before it except the Lally Columns.



Another place in Chelsea fire ruins where the Lally Columns stood the test without failure. Note condition of other metal.



In this building, also, the Lally Columns were the only part of the building to stand unharmed through the fire.



View of the ruins of the French Catholic Church and School, Salem, Mass.
after the fire.

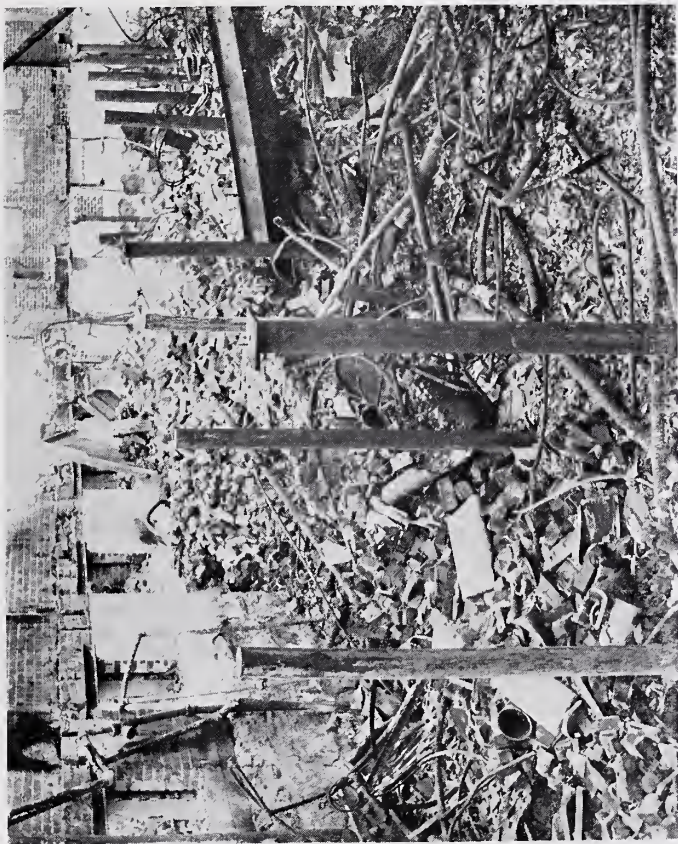


Church ruin, showing a lot of cast iron columns broken in several pieces.



Interior view of the French Catholic Church, Salem, Mass., showing the ruins after the fire.

The small white arrows show the condition of the cast iron columns that were used.



View of the French Parochial School ruins adjoining the church, showing the condition of the Lally Columns after the fire at Salem, Mass.



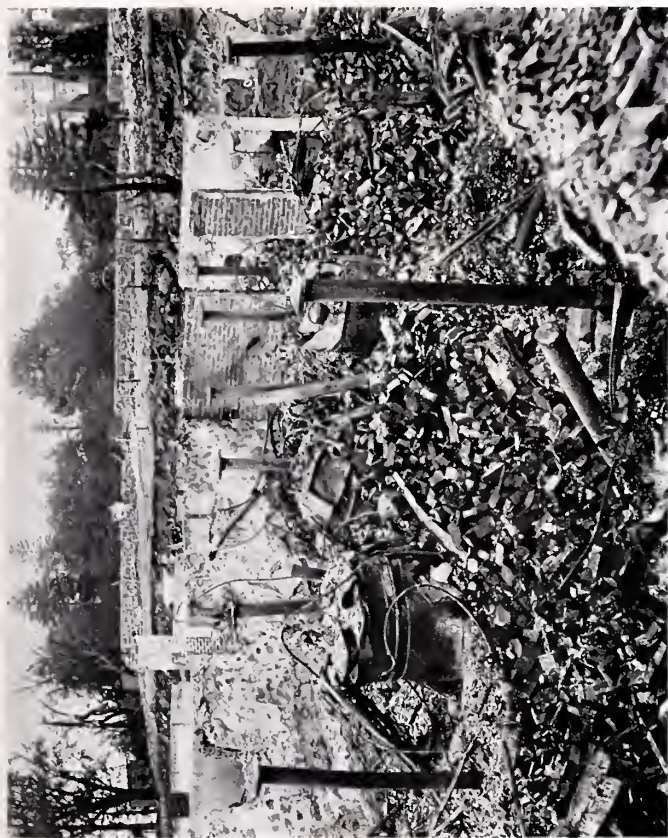
This building was equipped with cast iron columns which were completely destroyed as shown. The white arrows show some of the destroyed cast iron columns.



Note the condition of cast iron columns. White arrows indicate location.



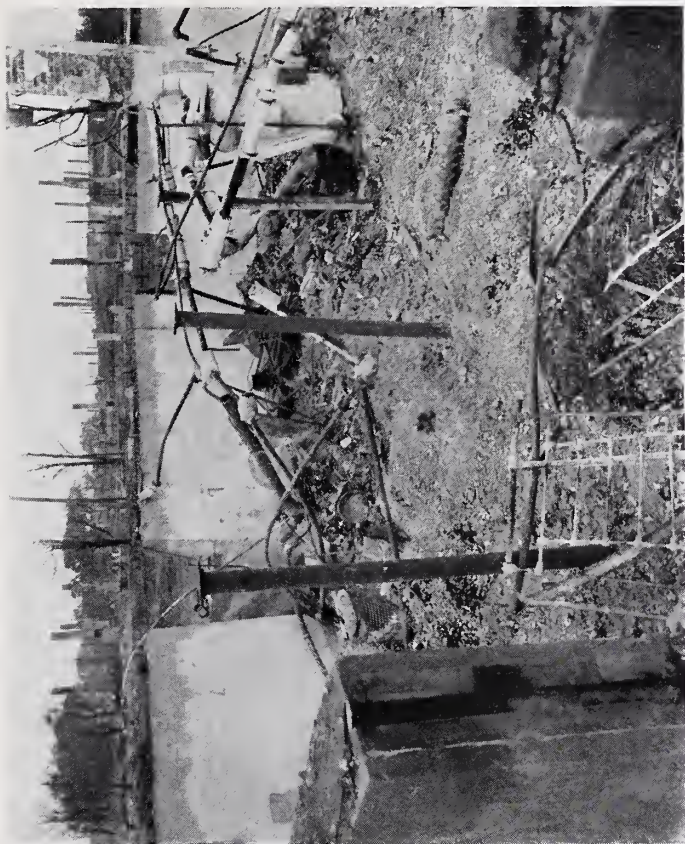
View of Lally Column holding the corner of a building after the fire.



A Salem ruin, showing the condition of the Lally Columns after the fire.



One of the many hundreds of residences where Lally Columns were used in the Salem fire.



Note the condition of all material and contrast with the Lally Columns.



Note carefully the white arrows; they mark the cast iron columns used in the engine house.

The following is a List of a few of
the Buildings where LALLY
COLUMNS are in use

SHETUCKET WORSTED MILL	Baltic, Conn.	HOME LIFE INSURANCE BUILDING	Chicago, Ill.
AMERICAN GRAPHAPHONE CO.	Bridgeport, Conn.	HOTEL ASTOR	Chicago, Ill.
BRIDGEPORT BRASS CO. FACTORY	Bridgeport, Conn.	I. A. C. BUILDING	Chicago, Ill.
CONNECTICUT BREWERIES CO.	Bridgeport, Conn.	LAWNDALE WHOLESALE GRO- CERY BUILDING	Chicago, Ill.
POLI THEATER	Bridgeport, Conn.	LA SALLE EXTENSION UNIVERSITY	Chicago, Ill.
AUTO EXCHANGE	Geo. Lewitt New Britain, Conn.	LIBERTY TRUST & SAVINGS BANK	Chicago, Ill.
NEW BRITAIN THEATER	New Britain, Conn.	MERCHANTS LITHOGRAPHING CO. BUILDING	Chicago, Ill.
C. W. BLAKESLEE	New Haven, Conn.	METROPOLITAN STATE BANK	Chicago, Ill.
MALLEY BUILDING, New Haven, Conn.		OPPENHEIMER & CO. DEPT. STORE	Chicago, Ill.
MOELLER BUILDING	New Haven, Conn.	PETTIBONE-MULLIKEN CO. BUILD- ING	Chicago, Ill.
CITY HALL	South Norwalk, Conn.	POST OFFICE, Logan Square Station	Chicago, Ill.
OVERLAND-WATERBURY GARAGE	Waterbury, Conn.	RECTOR'S RESTAURANT	Chicago, Ill.
NATCHAUG SCHOOL, Willimantic, Conn.		REGAN PRINTING CO. BUILDING	Chicago, Ill.
NUCKOLLS PACKING HOUSE CO.	Pueblo, Col.	SEARS ROEBUCK & CO. OFFICE	Chicago, Ill.
ROUMANIAN-GREEK CATHOLIC CHURCH	Aurora, Ill.	SMITH FORM-A-TRUCK CO. BUILD- ING	Chicago, Ill.
ROUMANIAN SOCIETY HALL	Aurora, Ill.	ST. KILLIAM'S CHURCH	Chicago, Ill.
PACIFIC PRESS PUBLISHING ASSO.	Brookfield, Ill.	ST. MELS' CHURCH	Chicago, Ill.
AMERICAN FILM CO. BUILDING	Chicago, Ill.	STOCK YARDS POST OFFICE	Chicago, Ill.
BRUNSWICK-BALKE-COLLENDER BUILDING	Chicago, Ill.	SPOFFORD-WHITE CO. BUILDING	Chicago, Ill.
CHICAGO ART INSTITUTE	Chicago, Ill.	S. S. KRESGE BUILDING	Chicago, Ill.
CHARLES BOSTROM BUILDING	Building Commissioner of Chicago	THE GLOBE MILLS	Chicago, Ill.
CHICAGO BEACH HOTEL	Chicago, Ill.	THIRTEENTH CHRISTIAN SCIENCE CHURCH	Chicago, Ill.
CHICAGO PACKING BOX CO. FACTORY	Chicago, Ill.	THOMAS M. SMYTH, Post Office	Chicago, Ill.
GARFIELD PARK STORAGE WAREHOUSE	Chicago, Ill.	THOMPSON RESTAURANTS	Chicago, Ill.
HOLCOMB STEEL CO. WAREHOUSE	Chicago, Ill.	UNION LINEN SUPPLY CO. FACTORY	Chicago, Ill.
		UNITED CIGAR STORES CO.	Chicago, Ill.

WHEELER CLOUGH VARNISH
 FACTORY Chicago, Ill.
 WOODLAWN BRANCH, Post Office
 Chicago, Ill.
 WOOLWORTH BUILDING Chicago, Ill.
 PUBLIC SCHOOL Glenview, Ill.
 ORRINGTON-LUNT LIBRARY
 BUILDING, Northwestern University,
 Evanston, Ill.
 THORNTON TOWNSHIP HIGH
 SCHOOL Harvey, Ill.
 WM. PEASE HOTEL Harvey, Ill.
 HINSDALE CLUB HOUSE, Hinsdale, Ill.
 EVANSTON HOTEL Evanston, Ill.
 CHICAGO STORE BUILDING
 Kankakee, Ill.
 OAK PARK FIRE DEPARTMENT
 Oak Park, Ill.
 LETTS & BENNETT APARTMENT
 BUILDING Rockford, Ill.
 FIRST CHURCH CHRISTIAN
 SCIENCE Wilmette, Ill.
 GRADE SCHOOL Hammond, Ind.
 ST. MICHAEL'S SCHOOL
 Schererville, Ind.
 WARSAW THEATER AND OFFICE
 BUILDING Warsaw, Ind.
 COMMONS BUILDING Dubuque, Ia.
 CUSHMAN-HOLLIS SHOE FACTORY
 Auburn, Maine
 Y. M. C. A. Augusta, Maine
 EASTERN TRUST BUILDING
 Bangor, Maine
 BATES STREET FACTORY
 Lewiston, Maine
 JOHN D. ROCKEFELLER, Jr.,
 RESIDENCE Seal Harbor, Maine
 ELKS CLUB Waterville, Maine
 LEACH & GARNER FACTORY
 Attleboro, Mass.
 ATTLEBORO SCHOOL, Attleboro, Mass.
 WALKER MISSIONARY HOME
 Auburndale, Mass.
 BELMONT SPRINGS COUNTRY
 CLUB Belmont, Mass.
 BEVERLY HIGH SCHOOL
 Beverly, Mass.
 ALMSHOUSE AND HOSPITAL (city
 of Boston) Boston, Mass.
 EYE AND EAR INFIRMARY (Nurses'
 Dormitory) Boston, Mass.
 FERGUSON'S BAKERY, Boston, Mass.

F. W. WOOLWORTH CO., Boston, Mass.
 N. E. COAT & TOWEL SUPPLY CO.
 Boston, Mass.
 PLANT SHOE FACTORY, Boston, Mass.
 UNITED DRUG CO. Boston, Mass.
 GEO. L. DOW BUILDING
 Cambridge, Mass.
 HENNESSEY BUILDING Cambridge
 MURRAY & EMERY CO. FACTORY
 Cambridge, Mass.
 RIVERSIDE PRESS, Cambridge, Mass.
 SALVATION ARMY BUILDING
 Cambridge, Mass.
 CAMBRIDGE PAPER BOX CO.
 Cambridge, Mass.
 J. L. HAMMETT CO., School Supplies
 Cambridge, Mass.
 TECH. BLOCK Cambridge, Mass.
 SAINT ROSE CHURCH (before and
 after the fire) Chelsea, Mass.
 LAWSON STABLES, "Dreamworld"
 Egypt, Mass.
 KERR MILL, AMERICAN THREAD
 Fall River, Mass.
 ROBICHAUD & MOUNTAIN BUILD-
 ING Gardner, Mass.
 HEARN BUILDING Holyoke, Mass.
 FARR ALPACA MILL Holyoke, Mass.
 CHERRY & WEBB STORES
 Lawrence, Mass.
 WASHINGTON MILLS, Lawrence, Mass.
 CITY STABLES Lowell, Mass.
 ST. PETER'S SCHOOL Lowell, Mass.
 JOHN PILLING SHOE FACTORY
 Lowell, Mass.
 LUDLOW MILL Ludlow, Mass.
 MALDEN HIGH SCHOOL
 Malden, Mass.
 BOSTON STORES, New Bedford, Mass.
 NEILD MANUFACTURING CO. MILL
 New Bedford, Mass.
 BOOTH MANUFACTURING CO.
 MILL New Bedford, Mass.
 HOLMES MANUFACTURING CO.
 MILL New Bedford, Mass.
 N. E. TEL. & TEL. COMPANY
 BUILDINGS throughout New England
 PUBLIC LIBRARY Newton, Mass.
 NEW HOME SEWING MACHINE
 FACTORY Orange, Mass.
 FARRELL BUILDING, Pittsfield, Mass.
 WAITE BUILDING Pittsfield, Mass.

- QUINCY HIGH SCHOOL, Quincy, Mass.
 ELKS HOME Revere, Mass.
 EXPOSITION BUILDINGS
 Springfield, Mass.
 STATE INFIRMARY, Tewksbury, Mass.
 TAYLOR BUILDING . Wellesley, Mass.
 GERMAN HOME, West Roxbury, Mass.
 KELLY & HAWES GARAGE, Winchester
 WOLLASTON HIGH SCHOOL
 Wollaston, Mass.
 RICHARDSON SILK MILL
 Belding, Mich.
 KNIGHTS OF MACCABEES OFFICE
 BUILDING Port Huron, Mich.
 BLUE VALLEY CREAMERY CO.
 BUILDING Grand Rapids, Mich.
 BANCROFT REALTY CO. BUILDING
 Saginaw, Mich.
 ST. JOSEPH SCHOOL, St. Joseph, Mich.
 SOUTHERN ALUMINUM CO. BLDG.
 Whitney, N. C.
 ERIE R.R. STATION . Allendale, N. J.
 EMBRIE MISSION . Englewood, N. J.
 D. L. & W. R.R. STATION AND
 HOUSES Glen Ridge, N. J.
 UNIVERSAL FILM CO. . Leonia, N. J.
 DURATEX CO. FACTORY, Newark, N. J.
 STATE ARMORY . . . Red Bank, N. J.
 Y. M. C. A. BUILDING . Summit, N. J.
 AJAX RUBBER CO. . . Trenton, N. J.
 TRENTON WATER DEPT. STATION
 Trenton, N. J.
 "BOSTON STORE," Binghamton, N. Y.
 KILMER BUILDING,
 Binghamton, N. Y.
 WALTER LAW STABLES
 Briarcliffe, N. Y.
 BORDEN MILK CO. STATION
 Brooklyn, N. Y.
 BOTANICAL GARDEN, Brooklyn, N. Y.
 BROOKLYN BASEBALL CLUB, EB-
 BETTS STADIUM . Brooklyn, N. Y.
 COLUMBUS DISTILLING CO.
 Brooklyn, N. Y.
 HECKER-JONES-JEWEL MILLING
 CO. BUILDING Brooklyn, N. Y.
 KIRKMAN SOAP CO., Brooklyn, N. Y.
 NORTH SIDE BANK . Brooklyn, N. Y.
 ST. MARY'S CHURCH, Court Street
 Brooklyn, N. Y.
 STANDARD OIL CO. . Brooklyn, N. Y.
 ALEX. CAMPBELL MILK STATION
 Coney Island, N. Y.
 COOK'S BATHS . Coney Island, N. Y.
 ACTORS' CLUB . . . Freeport, N. Y.
 HARRIMAN SCHOOL, Harriman, N. Y.
 FIRE HOUSE . . Mamaroneck, N. Y.
 PORT CHESTER HOSPITAL
 Port Chester, N. Y.
 DUTCHESS MANUFACTURING CO.
 Poughkeepsie, N. Y.
 FIAT MOTOR CO., Poughkeepsie, N. Y.
 PRICE FIREPROOFING CO.
 BUILDING . . . Poughkeepsie, N. Y.
 KNAPP BUILDING . . Rochester, N. Y.
 SEA VIEW HOSPITAL
 Staten Island, N. Y.
 GERMAN ODD FELLOWS HOME
 Yonkers, N. Y.
 W.K. VANDERBILT RESIDENCE
 Jericho, L. I.
 LOFT CANDY CO. . . Long Island City
 PORT WASHINGTON HIGH
 SCHOOL . . . Port Washington, L. I.
 SAGE FOUNDATION HOMES
 Forest Hills, L. I.
 WEST JEFFERSON CREAMERY
 Columbus, Ohio
 UNION CLOTHING CO. BUILDING
 Columbus, Ohio
 MONROE TOWNSHIP SCHOOL
 London, Ohio
 KAPPA SIGMA FRATERNITY HOUSE
 Norman, Okla.
 FELLOWS-HUBER SILK MILL
 E. Stroudsburg, Pa.
 CHARLES M. SCHWAB RESIDENCE
 Loretta, Pa.
 McCLINTOCK RESIDENCE
 Pittsburgh, Pa.
 HARRY PAYNE WHITNEY
 RESIDENCE Newport, R. I.
 GREEN & DANIELS FACTORY
 Pawtucket, R. I.
 ODD FELLOWS TEMPLE
 Sioux Falls, S. Dak.
 UNIVERSITY OF VIRGINIA
 Charlottesville, Va.
 CHURCH OF NOTRE DAME DES
 VICTOIRES St. Johnsbury, Vt.
 EXCELSIOR REALTY CO. BUILDING
 Milwaukee, Wis.

Safe Carrying Capacity for Cast Iron Columns

For reference only. We do not manufacture or sell cast iron columns

This table of strengths on cast iron columns has been computed from a series of 20 tests made at the United States Arsenal on cast iron columns of different makes, and some of which were made by the Arsenal itself for commercial use, so that there is no guesswork about this schedule; it is taken from the actual tests, made on the specimens taking the average compression with the average diameters contained in their own lengths on the tests made for the bases adapted in computing this table. The tests referred to can be obtained through the U. S. Government, should their accuracy be questioned. In reducing this table we have used a factor of 10 for safety, which is required in some cities, so that by multiplying any given load in this table by 10 you have the ultimate compression in tons, or if you want to use a factor of 8, which is allowable in some cities, add 25 per cent to any given figures of tons in said table.

Outside Diameter	Thickness of Shell	Weight per Foot	Sectional Area	Cast Iron. Length of Columns in Feet											
				8	10	12	14	16	18	20	22	24	26	28	30
				Safe loads in tons, factor of 10 used for safety											
6"	1"	49.1	15.7	34	29	25	22	19	16	12					
6"	1 $\frac{1}{4}$ "	58.	18.6	41	34	30	26	23	19	14					
6"	1 $\frac{1}{2}$ "	66.	21.2	47	39	34	30	26	22	16					
6"	2"	78.5	25.1	55	46	41	36	31	26	20					
7"	1"	58.90	18.9	47	40	34	31	28	25	21	18				
7"	1 $\frac{1}{4}$ "	70.	22.5	56	48	41	37	33	30	25	22				
7"	1 $\frac{1}{2}$ "	80.	25.9	65	55	47	42	38	34	29	26				

8"	1"	68.7	22.	57	52	44	39	36	33	29	26	23
8"	1 $\frac{1}{4}$ "	82.7	26.5	69	62	54	47	43	39	36	31	28
8"	1 $\frac{1}{2}$ "	95.	30.6	80	72	62	55	50	45	41	36	32
8"	2"	117.	37.6	98	89	76	67	62	56	50	45	40
9"	1"	78.5	25.1	70	63	55	51	45	41	38	35	31
9"	1 $\frac{1}{2}$ "	110.	35.3	99	88	78	72	63	58	54	49	44
9"	2"	137.	43.9	123	110	97	89	79	72	68	61	54
10"	1"	88.4	28.3	.....	74	68	62	54	50	46	43	41
10"	1 $\frac{1}{2}$ "	125.	40.1	.....	104	97	85	77	72	66	62	58
10"	1 $\frac{3}{4}$ "	141.6	45.4	.....	138	110	101	88	81	74	70	65
10"	2"	160.4	50.2	.....	131	121	111	97	90	82	77	72
11"	1"	98.2	31.4	.....	88	79	74	67	69	56	51	48
11"	1 $\frac{1}{2}$ "	139.7	44.8	.....	125	112	106	95	87	80	73	69
11"	1 $\frac{3}{4}$ "	158.7	50.9	.....	143	128	120	108	98	91	83	78
11"	2"	176.5	56.6	.....	154	142	134	120	110	101	93	87
12"	1"	107.5	34.6	.....	97	90	83	76	70	64	60	57
12"	1 $\frac{1}{2}$ "	154.6	49.5	.....	139	129	120	104	101	91	85	81
12"	1 $\frac{3}{4}$ "	175.5	56.4	.....	158	147	136	125	115	104	98	92
12"	2"	195.8	62.8	.....	176	164	152	139	128	116	109	103



THE various improvements on LALLY COLUMNS are covered by the following patents. Any infringement on these patents will be prosecuted to the full extent of the law.

Pat. Nov. 22, 1898

Pat. Aug. 1, 1905

Pat. Mar. 27, 1906

Pat. Nov. 13, 1906

Pat. Feb. 5, 1907

Pat. Feb. 19, 1907

Pat. Oct. 29, 1907

Pat. Oct. 20, 1908

Pat. Dec. 8, 1908

Pat. Aug. 26, 1913

Pat. May 13, 1916

THE LALLY COLUMN

is endorsed by leading engineers
and by the Chief Engineer of the
Department of the Supervising
Architect, United States Government

